digested, unassimilated, and discordant views and data, but it does not clear the atmosphere nor lift the smoke of battle.

A. M. Sakolski.

Valuation, Depreciation and the Rate-Base. By Carl Ewald Grunsky and Carl Ewald Grunsky, Jr. (New York: John Wiley & Sons, Inc. 1917. Pp. viii, 387. $4.00.)

Public Utility Rates. A Discussion of the Principles and Practice Underlying Charges for Water, Gas, Electricity, Communication and Transportation Services. By Harry Barker. (New York: McGraw-Hill Book Company, Ltd. 1917. Pp. xiv, 387. $4.00.)

These two books appeared almost simultaneously, both by engineers with extensive practical experience with rate control. Their chief significance is that they bring out the chaotic conditions of regulation, the uncertainties and indefinitenesses of procedure after a generation of discussion of principles and policies, and after fifteen years of attempts at regulation. Nothing is more needed, both for the protection of the public and the welfare of the business, than a definite and sensible policy, which actually establishes control of return on investment, states the terms at which investors place their capital in the public service, and provides for desirable extension of service. Both books should contribute substantially toward the realization of such a policy.

The Grunskys' book is less a comprehensive and systematic discussion of valuation and rate making in accordance with present procedure than the presentation of particular views based on personal experience and study; and many suggestions that deserve special consideration are offered. There is commendable omission of numerous elementary commonplaces, but unfortunately particular points are uselessly repeated over and over and, in general, material, much of it irrelevant, is presented in a very disorganized fashion.

The plan may be briefly summarized as follows: Take as the rate base "the reasonable and proper investment or original cost new, including a proper allowance for the cost of establishing and developing the business" (p. 30); make no deduction for depreciation, nor an allowance for appreciation, and, in some cases at least, make a deduction for public contribution to the investment; then, in fixing rates, first allow just interest on the investment, then add to the rate of return for the volume of business

and give the investors a share in the general prosperity of the community.

As to the rate base, the authors present really two bases of valuation, although it is not clear that they are aware of the fact and realize its significance: (1) "the legitimate investment necessary to establish the business" (p. 155), and (2) the cost of constructing the property. The first looks upon historical fact and represents investors' direct sacrifice; the second looks to the present and makes an appraisal of the existing property. Apparently the authors have in mind the first and offer the second as a mere alternative statement. But the two cannot be used thus; they do not even represent equivalent quantities. I should agree that the investors' direct sacrifice is the most reasonable rate base, which, of course, would not be subject to depreciation or appreciation, for it would be a historical quantity not subject to modification. But it cannot be used, because in the ordinary rate case the legitimate actual just investment cannot be determined. The problem then is to find the most nearly equivalent *appraisal of present property.* And this, under normal circumstances, would not be the gross actual cost new, as presented by the authors, but this amount diminished by depreciation.[1]

A chapter is devoted to showing that the actual life of property units in service does not agree with the probable life assumed in the depreciation allowance; some units are retired much earlier while others serve much longer; if then, depreciation charges are made according to any one of the standard formulas, the accumulation of funds will not agree with the replacement requirements. This is all true; but what seems to be given as the conclusion does not follow, that in place of depreciation there should be included in operating expenses the cost of replacement as retirements are made, and that therefore no deduction for depreciation should be made from cost new in an appraisal. Except for the largest and most varied properties, the policy of charging replacements instead of depreciation to operating expenses would not be practicable. If it could be and were followed generally, the authors' conclusion would, of course, apply to future investments; but it would not hold for the past when their theory was not followed, when rates to consumers were largely what the traffic would bear,

[1] For support of this view, see the reviewer's "Bases of Valuation in the Control of Return on Public Utility Investment," American Economic Review, vol. VI (Sept., 1916), pp. 570, 571, and 582 ff.

and when the property may or may not have been maintained according to reasonable standards. Not deducting depreciation from cost new would open the door for the inclusion in the appraisal of multitudes of items all but worthless, resulting in gross padding of the valuation.

It is urged that the investors should be given a share in the general prosperity, but that this be accomplished through an allowance of more than normal interest on investment rather than through the inclusion of appreciation in the rate base. Two questions are pertinent regarding this proposal: (1) How would the super-return be determined? (2) If there be additional return in lieu of appreciation, what corresponding adjustment for not deducting depreciation from the gross appraisal?

It is suggested also that additional returns be granted for volume of business. Again, how practically determine the super-rate? And, just why the allowance? Do the authors realize the real significance of a public utility and the purpose of regulation? We have to do with very important and almost universally necessary services; public service corporations and their control are merely the means of general coöperation for obtaining the services at least possible cost to the public. If this view be correct, then there is no reason for permitting additional returns for volume of business, nor for prosperity, except possibly for inducement to the best progressive management.

Turning to Mr. Barker's book, we find a more systematic discussion of the entire mechanism of regulation. It is perhaps the most orderly and generally comprehensive of the many engineering treatises on valuation and rate making. It offers no special formula of control; its purpose is mainly to analyze and describe existing procedure, and it succeeds very well. The discussion is carefully balanced, and it offers many excellent criticisms and suggestions. The author appears public-spirited, with possibly an over-confidence that his own state of mind is that of public service corporation officials. If space permitted, many minor points might be profitably discussed or criticized. On the whole, the book is an important addition to the literature on regulation, and should help in the formulation of more definite standards and procedure in valuation and rate making.

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